BIO*technology* Education

Volume Contents and Author Index
Volume 3, 1992

Pergamon Press

BIO*technology* Education

A Resource for Teachers and Students in the Biological Sciences

EDITOR:
Paul Wymer, Centre for Medical Science and History, The Wellcome Trust, 179 Great Portland Street, London W1N 5TB, UK

CHIEF EDITORIAL ADVISOR:
Martin Griffin, Department of Life Sciences, The Nottingham Trent University, Clifton Lane, Nottingham NG11 8NS, UK

EDITORIAL ADVISORY BOARD:

Peter B. Baker
Laboratory of the Government Chemist
F.B. Division, Room 210A
Queen's Road, Teddington
Middlesex TW11 0LY, UK

H. Bayrhuber
IPN — Institute for Science Education
Olshausenstrasse 62
D-2300 Kiel 1, FRG

R. P. Cox
Institute of Biochemistry
Odense Universitet
Campusvej 55
DK-5230 Odense M
Denmark

John Grainger
National Centre for Biotechnology Education
University of Reading
London Road
Reading RG1 5AQ, UK

J. D. McInerney
Biological Sciences Curriculum Study
830 North Tejon Street
Suite 405
Colorado Springs
CO 80903, USA

David A. Micklos
DNA Learning Center
Cold Spring Harbor Laboratory
Cold Spring Harbor
NY 11724, USA

Crellin Pauling
Department of Biology
San Francisco State University
1600 Holloway Avenue
San Francisco
CA 94132, USA

Ognian Serafimov
Jörg-Zürn Technical High School
Rauensteinstr. 17
D-7770 Überlingen, FRG

Tom Stephenson
School of Water Sciences
School of Industrial and Manufacturing Science
Cranfield Institute of Technology
Cranfield, Bedford
MK43 0AL, UK

Paul H. Williams
Department of Plant Pathology
Russell Laboratories
University of Wisconsin — Madison
1630 Linden Drive, Madison
WI 53706, USA

Edward Yoxen
Centre for Exploitation of Science and Technology
Manchester Science Park
Lloyd Street North
Manchester M15 4EN, UK

Production Editor
Andrew Cullis, Journals Production, Pergamon Press Ltd, Headington Hill Hall, Oxford OX3 0BW, UK.

Publishing, Subscription and Advertising Offices
Pergamon Press Ltd, Headington Hill Hall, Oxford OX3 0BW, UK. Pergamon Press Inc., 660 White Plains Road, Tarrytown, NY 10591-5153, USA.

Copyright © 1993 Pergamon Press Ltd

Whilst every effort is made by the publishers and editorial board to see that no inaccurate or misleading data, opinion or statement appear in this journal, they wish to make it clear that the data and opinions appearing in the articles and advertisements herein are the sole responsibility of the contributor or advertiser concerned. Accordingly, the publishers, the editorial board and editors and their respective employees, officers and agents accept no responsibility or liability whatsoever for the consequences of any such inaccurate or misleading data, opinion or statement.

Volume Contents

Number 1

Special Issue: Mason Conferences on Biotechnology

A. Radford	1	Guest Editorial
B. Richards	2	New ways from biotechnology to detect and treat old and new diseases
C. J. Suckling	9	Catalytic antibodies — catalysts from scratch
J. Kinderlerer	21	Regulation and safety of biological processes and products
B. Atkinson	26	Biotechnology in the malting and brewing industry
S. J. Pirt	33	Renewable resources of energy and materials
R. B. Flavell	37	Plant biotechnology and agriculture
P. Hambleton	43	Taming a toxin: therapeutic use of botulinum toxin
Teaching Resources		
	46	Book reviews
Forthcoming Events	49	

Number 2

P. Wymer	51	Editorial
A Room with a View		
J. Hill	52	An environmentalist's perspective on genetic modification
Biotechnology in Perspective		
J. Grindley	55	The predictions, promises and reality of biotechnology
Biotechnology in Practice		
R. W. Attwell and C. A. Smith	58	The use of semi-micro quantitative assays for enzymes of industrial importance in microbiology and biochemistry teaching
R. J. Lebowitz and Seng-Lai Tan	61	An instructional unit on the somatic cell genetics of plants using *Pandorina morum*
L. Levinger, E. Singh and J. Sutton	67	Rapid subcloning and screening for a new restriction site
L. R. Aaronson, N. L. McCann and J. P. McCormack	72	Cloning and expression of the thermostable alpha-amylase gene from *Bacillus stearothermophilus* in *Escherichia coli*: a project in biotechnology for the teaching laboratory

Reviews
L. Jervis 78 Bioseparations — an overview
P. Morgan 83 Biotechnology and oil spills

Proceedings
J. M. Grainger 89 A European initiative to promote public understanding of biotechnology through school and college education

Teaching Resources
92 Book reviews

Forthcoming Events 98

Number 3

P. Wymer 101 Editorial

A Room with a View
L. Levidow and J. Tait 102 Which public understanding of biotechnology?

Biotechnology in Practice
U. R. Nellen 107 The ELISA test: a universal procedure for the identification of antigens on the basis of biotechnologically produced monoclonal antibodies — information and school-experiment
J. Verran 113 A learning project: microbiology videos produced for school students by polytechnic students

Reviews
T. Palmer 116 Towards gene therapy for inborn errors of metabolism
L. Dill and V. L. Dunham 120 Undergraduate biotechnological education in the United States

Proceedings
H. Bayrhuber 124 Biotechnology in biology education in South Asian countries

Teaching Resources
126 Book reviews
129 Software

Forthcoming Events 131

Number 4

P. Wymer 133 Editorial

Biotechnology in Perspective
J. Bijman 134 Can biotechnology help to increase livestock productivity?

Biotechnology in Practice

M. J. C. Crabbe — 138 — The three-dimensional structure of lysozyme: a tertiary level IT project using a novel predictive strategy and molecular modelling to study protein secondary structure

F. L. García-Carreño — 145 — Protease inhibition in theory and practice

L. Levinger and V. Greene — 151 — β-Globin gene amplification and sickle cell allele detection by DdeI digestion and direct sequencing

W. L. Baker — 156 — Experiments with penicillin acylase

Reviews

S. Hayward, N. Davies and M. Griffin — 158 — A study of manpower, education and training requirements in biotechnology: Germany, the UK and Spain

W. A. Sawahel and D. J. Cove — 167 — Model systems for studying plant molecular biology

Teaching Resources

173 — Book reviews

Forthcoming Events — 177

i — Volume Contents and Author Index for Volume 3, 1992